**Course: Math 8 CCSS Standard Number(s): 8.EE.3 Day: 20**

**Unit # and Title: Unit One – Expressions and the Number System Block(s)/Period(s): 1 2 3 4 5 6**

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| **Unit Essential Question(s):** | **In what ways can rational numbers be useful?** | | |
| **Learning Target(s)**  **“I can statements”** | **I can compare quantities written as the product of a single-digit number and a power of ten by stating their multiplicative relationships.** | | |
| **Essential Vocabulary** | **Scientific Notation**  **base**  **exponent**  **integer**  **decimal**  **power of ten**  **standard notation** | | |
| **Resources and Materials** | **Teacher** | | **Student** |
| **Teacher Created chart**  **Guided Notes**  **Guided Practice**  **Glencoe C3 Lessons: 2-9**  **On Core Lessons: 1-2**  **Math’scool Lesson** [5.7](https://gems.gcsnc.com/lvcontentitems_23/lvContentItems_23/DispForm.aspx?ID=1670)  **Algebra’scool Lesson** [11.2](https://gems.gcsnc.com/lvcontentitems_23/lvcontentitems_23/dispform.aspx?id=1305)  **Destination Math:**  **Session:** [**Writing Numbers Using Scientific Notation**](https://gems.gcsnc.com/lvcontentitems_41/lvContentItems_41/DispForm.aspx?ID=168&source=/_layouts/LearningVillage/CloseDialog.aspx)  **Session:** [**Comparing Numbers in Scientific Notation**](https://gems.gcsnc.com/lvcontentitems_41/lvContentItems_41/DispForm.aspx?ID=169&source=/_layouts/LearningVillage/CloseDialog.aspx)  **Session:** [**Writing Numbers between 0 & 1 in Scientific Notation**](https://gems.gcsnc.com/lvcontentitems_41/lvContentItems_41/DispForm.aspx?ID=170&source=/_layouts/LearningVillage/CloseDialog.aspx) | | **Student tool kit** |
| **8 Mathematical Practices:** | | | |
| 1. Make sense of problems and persevere in solving them.  2. Reason abstractly and quantitatively.  3. Construct viable arguments and critique the reasoning of others.  4. Model with mathematics. | | 5. Use appropriate tools strategically.  6. Attend to precision.  7. Look for and make use of structure.  8. Look for and express regularity in repeated reasoning. | |
| **Activating Strategy**  **(Opening Activity)** | **Students will complete a semi-blank chart, containing numbers written in scientific notation or standard form, and asked to complete the chart.** | | |
| **Cognitive Teaching Strategies**  **Me/We/Few/You**  **(TIP-Teacher input**  **SAP-Student actively participates**  **GP – Guided Practice**  **IP-Independent Practice)** | **Students will be given questions asking them to compare two values in Scientific Notation. Without calculators, students will have determine which value is larger and why?**  Example 1:  How much larger is 6 x 105 compared to 2 x 103  *Solution:* 300 times larger since 6 is 3 times larger than 2 and 105 is 100 times larger than 103.  Example 2:  Which is the larger value: 2 x 106 or 9 x 105?  *Solution*: 2 x 106 because the exponent is larger  **Students will complete OPEN NOTES from the teacher generated power point, containing instruction on how to compare numbers in Scientific Notation, including vocabulary and examples and guided practice.**  [Comparing Numbers in Scientific Notation:  Student Logbook and Your Turn - English](http://downloads.hmlt.hmco.com/EdSchool/LMS4Resources/Print/MSC5/DMMSC5-3.2.2.PDF)  [Answer Key - page 206 - English](http://downloads.hmlt.hmco.com/EdSchool/LMS4Resources/Print/MSC5.pdf)  **Students complete independent practice in small groups or pairs.**  **Workbook pages 9-10**  **Students will be asked to explain their answers to the rest of the class.** | | |
| **Summarizing Strategy**  **(Closing Activity)** | **Students will be asked to give two rules they can use to determine if different values written in scientific notation, which one is larger/smaller, and how much larger/smaller is one value compared to another.** | | |
| **Assessment/Homework** | **Given five values written in Scientific Notation, place them in order of largest to smallest. (given by the teacher in the power point)** | | |
| **Extending/Refining** |  | | |